

LISTING OF CLAIMS

Claim 95 (new): A stent for holding open a blood vessel formed of a structure consisting essentially of a plurality of triangular cells, each triangular cell comprising:

 a first loop containing section, the first loop containing section arranged generally in the circumferential direction,

 a second loop containing section, the second loop containing section arranged generally in the circumferential direction and joined to the first loop containing section at a first junction; and

 a third loop containing section joined to the first loop containing section at a second junction and joined to the second loop containing section at a third junction;

wherein a plurality of first loop containing sections form a first band of loops which repeat at a first frequency and a plurality of second and third loop containing sections form a second band of loops which repeat at a second frequency, said first and second bands alternating along the longitudinal axis of the stent wherein each triangular cell is formed of two loops at the first frequency and three loops at the second frequency, and said first, second and third loop containing section having legs.

Claim 96 (new): A stent according to claim 95, wherein the first loop containing section is relatively adapted to enable radial support, and the second and third loop containing sections are relatively adapted to enable longitudinal flexibility.

Claim 97 (new): A stent according to claims 95 or 96, wherein the first loop containing section has wider legs than the second and third loop containing sections.

Claim 98 (new): A stent according to claim 95, wherein the first frequency is lower than the second frequency.

Claim 99 (new): A stent according to claim 95, wherein the first loop containing section has one free loop.

Claim 100 (new): A stent according to claim 95, wherein the stent comprises nitinol.

Claim 101 (new): A stent according to claim 95, wherein the stent is made of stainless steel.

Claim 102 (new) A stent according to claims 95 or 96, wherein each cell in the stent encompasses the same area.

Claim 103 (new) A stent according to claims 95 or 96, wherein the cell is arranged so that when expanded a length of the cell along a circumference of the stent is longer than a length of a cell along the longitudinal axis of the stent.

Claim 104 (new) A stent for widening a vessel in the human body comprising:

- a plurality of first meander patterns comprising even first meander patterns and odd first meander patterns which are 180° out of phase with each other;

- a plurality of second meander patterns intertwined with the first meanders containing a plurality of horizontally-oriented loops;

- wherein at least one of said loops is disposed between all neighboring first meander patterns.

Claim 105 (new): The stent according to claim 104 wherein the meander patterns form uniformly distributed cells along the length of the stent.

Claim 106 (new): The stent according to claim 105 wherein the cells are triangular cells.

Claim 107 (new): A stent according to claim 106, wherein each of the triangular cells is comprised of a first loop containing section, a second loop containing section, and a third loop containing section.

Claim 108 (new): A stent according to claim 107, wherein the first loop containing section is formed by a portion of a first meander pattern and the second and third loop containing sections are formed by portions of one or more second meander patterns.

Claim 109 (new): A stent according to claim 107, wherein the first loop containing section has wider legs than the second and third loop containing sections.

Claim 110 (new): A stent according to claim 104, wherein the first meander pattern has three loops per cell.

Claim 111 (new): A stent according to claim 104, wherein the second meander patterns comprise four loops per cell.

Claim 112 (new): A stent according to claim 104, wherein the first and second meander patterns have center lines that are substantially orthogonal.

Claim 113 (new): A stent according to claim 107, wherein the second and third loop containing sections each have two loops.

Claim 114 (new): A stent according to claim 107, wherein the loops of the second and third loop containing sections are adapted to compensate for the tendency of the loops of the first loop containing section to foreshorten when the stent is expanded.

Claim 115 (new) A multicellular stent for holding open a lumen, comprising:

a plurality of even and odd vertical meander patterns, the odd vertical meander patterns being located between every two even vertical meander patterns and being out of phase with the even vertical meander patterns,

a plurality of even and odd horizontal meander patterns, the odd horizontal meander patterns being located between every two even horizontal meander patterns,

the vertical meander patterns are intertwined with the horizontal meander patterns to form a structure consisting of plurality of triangular cells, each of said triangular cells having at least one loop containing section arranged generally in the circumferential direction.

Claim 116 (new): A multicellular stent according to claim 115, wherein the triangular cells are formed by a first loop containing section, a second loop containing section connected to the first loop containing section, and a third loop containing section connected to the first and second loop containing section.

Claim 117 (new): A multicellular stent according to claim 116, wherein the first loop containing section is formed from a portion of a vertical meander pattern.

Claim 118 (new): A multicellular stent according to claim 117, wherein the second and third loop containing sections are formed from portions of one or more horizontal meander patterns.

Claim 119 (new): A multicellular stent according to claim 118, wherein members forming the first loop containing section have wider legs than members forming the second and third loop containing sections.

Claim 120 (new): A multicellular stent according to claim 115, wherein the stent is made of stainless steel.

Claim 121 (new): A multicellular stent according to claim 115, wherein the stent is made of nitinol.

Claim 122 (new): A multicellular stent according to claim 117, wherein the first loop containing section includes one free loop.

Claim 123 (new): A multicellular stent according to claim 115, wherein each triangular cell of the stent encompasses about the same area.

Claim 124 (new): A multicellular stent according to claim 122 wherein the width of members forming the second loop containing section and the width of members forming the third loop containing section are the same.

Claim 125 (new) A uniformly flexible expandable stent comprising a plurality of enclosed flexible spaces, each of the plurality of enclosed flexible spaces consisting essentially of a plurality of triangular cells, each triangular cell including:

- a) a first member having a first end and a second end;
- b) a second member having a first end and a second end;
- c) a third member having a first end and a second end;
- d) a fourth member having a first end and a second end; the first end of the first member communicating with the first end of the second member, the second end of the second member communicating with the second end of the third member, and the first end of the third member communicating with the first end of the fourth member;
- e) the first member and the second member with the curved portion at their ends forming a first loop;
- f) the third member and the fourth member with the curved portion at their ends forming a second loop;
- g) a fifth member having a first end and a second end;

- h) a sixth member having a first end and a second end;
- i) a seventh member having a first end and a second end;
- j) an eighth member having a first end and a second end;
- k) a ninth member having a first end and a second end; and
- l) a tenth member having a first end and a second end, the first end of the fifth member coupled to the second end of the first member, the second end of the fifth member communicating with the second end of the sixth member, the first end of the sixth member communicating with the first end of the seventh member, the second end of the seventh member communicating with the second end of the eighth member, the first end of the eighth member communicating with the first end of the ninth member, the second end of the ninth member communicating with the second end of the tenth member, and the first end of the of the tenth member coupled to the second end of the fourth member;
- m) the fifth member and the sixth member with the curved portion at their ends forming a third loop;
- n) the seventh member and the eighth member with the curved portion at their ends forming a fourth loop; and
- o) the ninth member and the tenth member with the curved portion at their ends forming a fifth loop, such that the first and the fourth members are joined together through the fifth, the sixth, the seventh, the eighth, the ninth and the tenth members without connection directly between first and fourth members.

Claim 126 (new): The stent of claim 125, wherein the first member, the third member, the sixth member, the eighth member, and the tenth member have substantially the same angular orientation to the longitudinal axis of the stent and the second member, the fourth member, the fifth member, the seventh member, and the ninth member have substantially the same angular orientation to the longitudinal axis of the stent.

Claim 127 (new): The stent of claim 125, wherein at least one of the members in at least one of the plurality of spaces has a length that is greater than the length of the other members in that space.

Claim 128 (new): The stent of claim 125, wherein at least one of the first, second, third, and fourth members in at least one of the plurality of spaces has a length that is longer than the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 129 (new): The stent of claim 128, wherein at least one of the first, second, third, and fourth members in at least one of the plurality of spaces has a length that is about twice the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 130 (new): The stent of claim 125, wherein at least one of the first, second, third and fourth members in at least one of the plurality of spaces has a length that is substantially equal to the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 131 (new): The stent of claim 125, wherein the first, second, third, and fourth members in at least one of the plurality of spaces have a width that is different than the width of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 132 (new): The stent of claim 131, wherein the first, second, third, and fourth members in at least one of the plurality of spaces have a width that is greater than the width of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 133 (new): The stent of claim 125, wherein at least one member in at least one of the plurality of spaces has a width that is greater than the other members in that space.

Claim 134 (new) The stent of claim 127, wherein at least the member having the greatest length in the space is joined to an adjacent member which extends in an adjacent space.

Claim 135 (new) The stent of claim 125, wherein a substantial portion of each of the members is substantially straight.

Claim 136 (new) The stent of claim 125, wherein the members are comprised of metal.

Claim 137 (new) The stent of claim 136, wherein the metal is selected from the group consisting of stainless steel and nitinol.

Claim 138 (new): The stent of claim 125, wherein the first, second, third, and fourth members and the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different flexibilities with respect to each other.

Claim 139 (new): The stent of claim 138, wherein the first, second, third, and fourth members are more flexible than the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 140 (new): The stent of claims 138, wherein the fifth, sixth, seventh, eighth, ninth, and tenth members are more flexible than the first, second, third, and fourth members.

Claim 141 (new): The stent of claim 125, wherein at least one portion of at least one of the first, second, third, and fourth members and at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different flexibilities with respect to each other.

Claim 142 (new): The stent of claim 141, wherein at least one portion of at least one of the first, second, third, and fourth members is provided with at least one portion that is more flexible than at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 143 (new): The stent of claim 141, wherein at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members is provided with at least one portion that is more flexible than at least one portion of at least one of the first, second, third, and fourth members .

Claim 144 (new): The stent of claim 125, wherein the first, second, third, and fourth members and the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different resistances to radial compression with respect to each other.

Claim 145 (new): The stent of claim 144, wherein the first, second, third, and fourth members have a greater resistance to radial compression than the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 146 (new): The stent of claims 144, wherein the fifth, sixth, seventh, eighth, ninth, and tenth members have a greater resistance to radial compression than the first, second, third, and fourth members.

Claim 147 (new): The stent of claim 125, wherein at least one portion of at least one of the first, second, third, and fourth members and at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different resistances to radial compression with respect to each other.

Claim 148 (new): The stent of claim 147, wherein at least one portion of at least one of the plurality of the first, second, third, and fourth members is provided with at least one portion that

has a greater resistance to radial compression than at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 149 (new): The stent of claim 147, wherein at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members is provided with at least one portion that has a greater resistance to radial compression than at least one portion of at least one of the first, second, third and fourth members.

Claim 150 (new): A stent for holding open a blood vessel formed of a structure consisting essentially of a plurality of triangular cells, each triangular cell comprising:

a first loop containing section, the first loop containing section arranged generally in the circumferential direction, the loops in said first loop containing section occurring at a first frequency;

a second loop containing section, the second loop containing section arranged generally in the circumferential direction, the loops in said second loop containing section occurring at a second frequency; and

a third loop containing section, the loops in said third loop containing section also occurring at a second frequency that is higher than said first frequency, said third loop containing section joined to said first and second loop containing sections such that a plurality of first loop containing sections are joined together through the second and third loop containing sections without connection directly between the first loop containing sections.

Claim 151 (new): A stent according to claim 150, wherein the first loop containing section is relatively adapted to enable radial support and the second and third loop containing sections are relatively adapted to enable longitudinal flexibility.

Claim 152 (new): A stent according to claim 150, wherein the first loop containing sections have wider legs than the second and third loop containing sections.

Claim 153 (new): A stent according to claim 150, wherein the first loop containing section has two loops for every three loops combined of said second and third loop containing sections in each triangular cell.

Claim 154 (new): A stent according to claim 153, wherein, while flexing, loops in the second and third loop containing sections have maximal strain of the expanded stent within a blood vessel that is lower than the elastic limit of the material of the stent.

Claim 155 (new): A stent according to claim 150, wherein the first loop containing sections are 180 degrees out of phase with each other along the length of the stent.

Claim 156 (new): A stent according to any of claim 155, wherein the cells each include two loops of said first loop containing section and three loops of said second and third loop containing sections combined.

Claim 157 (new): A stent according to claim 150, wherein the stent is made of stainless steel.

Claim 158 (new): A stent according to claim 150, wherein substantially each cell in the stent encompasses the same area.

Claim 159 (new): A stent according to claim 150, wherein the cell is arranged so that when expanded a length of the cell along a circumference of the stent is longer than a length of a cell along the longitudinal axis of the stent.

Claim 160 (new): A stent for holding open a blood vessel formed of a plurality of triangular cells, each triangular cell comprising:

a plurality of curvilinear members joined to define each triangular cell of the stent, the curvilinear members having a thickness, generally disposed in the circumferential direction;

the curvilinear members are further joined together to form a plurality of first and second alternating sections that alternate along the longitudinal axis of the stent, the first and second sections are continuous without disconnection about the circumference of the stent, the first and second sections joined together in substantially a parallel manner along the longitudinal axis of the stent;

the thickness within each section is substantially uniform, and the thickness of the first section is larger than the thickness of the second section; and

the first section is 180° out of phase with the next alternating first section of the stent.

Claim 161 (new): The stent according to claim 160, wherein the first section has fewer curves than the second section within the triangular cell.

Claim 162 (new): The stent according to claim 160, wherein the first section is relatively adapted to provide radial support, and the second section is relatively adapted to provide longitudinal flexibility.

Claim 163 (new): The stent according to claim 160, wherein a total length of the first section is shorter than a total length of the second section within the triangular cell, if the curvilinear members of each section within the triangular cell were flattened to remove the curves and formed a straight line for each section within the triangular cell.

Claim 164 (new): A stent for holding open a blood vessel formed of a plurality of triangular cells, each triangular cell comprising:

a first curvilinear section arranged generally in the circumferential direction;

a second curvilinear section arranged generally in the circumferential direction and periodically joined in the direction of the longitudinal axis of the stent to the first curvilinear section to define the triangular cell;

the first and second curvilinear sections alternating along the longitudinal axis of the stent, each curvilinear section formed continuously without disconnection about the circumference of the stent; and

the first curvilinear section 180° out of phase with the next alternating first curvilinear section of the stent.

Claim 165 (new): A stent according to claim 164, wherein the first curvilinear section has at least three curves within the triangular cell.

Claim 166 (new): A stent according to claim 164, wherein the second curvilinear section has at least five curves within the triangular cell.

Claim 167 (new): A stent according to claim 164, wherein the stent consists essentially of stainless steel.

Claim 168 (new): A stent according to claim 164, wherein the stent consists essentially of nitinol.

Claim 169 (new) A stent according to claim 164, wherein each triangular cell in the stent encompasses substantially the same area.

Claim 170 (new) A stent for widening a vessel in the human body comprising:

a first curvilinear section arranged generally in the circumferential direction;

a second curvilinear section arranged generally in the circumferential direction and periodically joined in the direction of the longitudinal axis of the stent to the first curvilinear section to define a triangular cell;

the first and second curvilinear sections alternating along the longitudinal axis of the stent, each curvilinear section formed continuously without disconnection about the circumference of the stent;

the first curvilinear section 180° out of phase with the next alternating first curvilinear section in the longitudinal direction of the stent; and

a junction member joining the first and second curvilinear sections in the direction of the longitudinal axis of the stent, each junction member being at least two curvilinear sections away in the longitudinal direction from a corresponding junction member of another triangular cell where the junction members share substantially the same longitudinal axis and are substantially aligned with each other forming a uniform cellular structure.

Claim 171 (new) A stent according to claims 170, wherein the triangular cell is arranged, so that when the stent is expanded, a length of the triangular cell along a circumference of the stent is longer than a length of the same triangular cell along the longitudinal axis of the stent.

Claim 172 (new): A stent according to claim 170, wherein each junction member is three curvilinear sections away in the longitudinal direction from a corresponding junction member of another triangular cell where the junction members share substantially the same longitudinal axis and are substantially aligned with each other forming a uniform cellular structure.

Claim 173 (new): A stent according to claim 170, wherein the first curvilinear section has fewer curves within the triangular cell than the second curvilinear section.

Claim 174 (new): A stent according to claim 173, wherein the first curvilinear section has at least three curves within the triangular cell and the second curvilinear section has at least five curves within the same triangular cell.

Claim 175 (new): A stent according to claim 174, wherein the first curvilinear section provides radial support and the second curvilinear section provides longitudinally flexibility to the stent.

Claim 176 (new): A stent according to claim 170, wherein the curves of the second curvilinear sections are adapted to compensate for the tendency of the curves of the first curvilinear sections to foreshorten when the stent is expanded.

Claim 177 (new): A stent according to claim 170, wherein each triangular cell of the stent encompasses about the same area.

Claim 178 (new) The stent according to claim 170, wherein the junction member between the first and second curvilinear sections is substantially straight.

Claim 179 (new) The stent according to claim 170, wherein the stent is made of metal selected from the group consisting of stainless steel, nitinol, gold, and any combination thereof.

Claim 180 (new): The stent of claim 170, wherein the first curvilinear section has a greater resistance to radial compression than the second curvilinear section.

Claim 181 (new): A stent for holding open a blood vessel consisting essentially of a plurality of triangular cells, each triangular cell comprising:

a first loop containing section, the first loop containing section arranged generally in the circumferential direction wherein the loops repeat at a first frequency;

a second loop containing section joined to the first loop containing section at a first junction point, said second loop containing section wherein the loops repeat at a second frequency; and

a third loop containing section joined to the first loop containing section at a second junction point and joined to the second loop containing section at a third junction point, wherein the loops repeat at a third frequency, said first loop containing section containing two loops for every three loops of the second and third loop containing sections.

Claim 182 (new): A stent according to claim 181, wherein the first loop containing section includes one free loop.

Claim 183 (new): A stent according to claim 182, wherein one leg of the free loop is shorter than the other leg of the loop.

Claim 184 (new): A uniformly flexible stent for holding open a blood vessel comprising:

- a. a first loop containing section, said first loop containing section arranged generally in a circumferential direction;
- b. a second loop containing section, said second loop containing section arranged generally in the circumferential direction;
- c. at least one of said first and second loop containing sections formed of a single, continuous, generally sinusoidal pattern; and
- d. a third loop containing section, said third loop containing section arranged generally in the circumferential direction, disposed in the generally circumferential space between said first and second loop containing sections and alternately joined to said first and second loop containing sections, wherein said third loop containing section comprises three loops for every two

loops of said first loop containing section, said first, second and third loop containing sections forming a plurality of cells and alternating sinusoidal patterns.

Claim 185 (new): A stent according to claim 184, wherein the second loop containing section of each cell forms at least one loop facing toward the interior of the cell.

Claim 186 (new): A stent according to claim 185, wherein the third loop containing section forms one loop facing toward the interior of the cell.

Claim 187 (new): A stent according to claim 184, wherein the stent is made of stainless steel.

Claim 188 (new): A stent according to claim 184, wherein the stent is made of Nitinol.

Claim 189 (new): Stent for holding open a blood vessel comprising:

- a) a plurality of first loop containing sections which are arranged generally in the circumferential direction and consist essentially of a basically sinusoidal pattern having loops occurring at a first frequency;
- b) a plurality of second loop containing sections which are arranged generally in the circumferential direction and consist essentially of a basically sinusoidal pattern having loops occurring at said first frequency;
- c) wherein the first loop containing sections and the second loop containing sections are 180° out of phase with each other;
- d) a plurality of a third loop containing sections having basically sinusoidal patterns with loops occurring at a second frequency that is higher than said first frequency, the third loop containing section being disposed in the generally circumferential space between said first and second loop containing sections and alternately joined to said first and said second loop containing sections;

- e) wherein the loops in said first, second and third loop containing sections are disposed and adapted to cooperate so that, when the expanded stent is in a curved lumen, cells on the outside of the curve open in length, but narrow circumferentially whereas cells on the inside of the curve shorten in length but widen circumferentially.

Claim 190 (new): Stent for widening a blood vessel in the human body comprising:

- a) a plurality of first circumferential bands each being a basically sinusoidal pattern of loops at a first frequency;
- b) a plurality of second circumferential bands each being a basically sinusoidal pattern of loops at a second frequency higher than said first frequency, alternating with said first circumferential bands and periodically coupled to adjacent first circumferential bands to form cells;
- c) wherein adjacent first circumferential bands are 180° out of phase with each other, and
- d) wherein the loops in said bands are disposed and adapted to cooperate so that, when the expanded stent is in a curved lumen, cells on the outside of the curve open in length, but narrow circumferentially whereas cells on the inside of the curve shorten in length but widen circumferentially.

Claim 191 (new): Stent for holding open a blood vessel formed of a plurality of triangular cells, each triangular cell comprising,

- a) a first loop containing section, consisting essentially of a basically sinusoidal form, arranged generally in the circumferential direction;
- b) a second loop containing section consisting essentially of a basically sinusoidal form, joined to the first loop containing section at a first junction point;
- c) and a third loop containing section joined to the first loop containing section at a second junction point and joined to the second loop containing section at a third junction point;

- d) wherein the loops of the first section occur at a first frequency and the loops of the second and the third sections are arranged in the circumferential direction and occur at a second frequency that is higher than the first frequency and wherein adjacent first sections are 180° out of phase with each other and
- e) wherein the loops in said cells are disposed and adapted to cooperate so that, when the expanded stent is in a curved vessel, cells on the outside of the curve open in length, but narrow circumferentially whereas cells on the inside of the curve shorten in length but widen circumferentially.

Claim 192 (new): A multi cellular stent for holding open a lumen, comprising:

- a) a plurality of even and odd vertical meander patterns each consisting essentially of a basically sinusoidal form having loops, the odd vertical meander patterns being located between every two even vertical meander patterns and being 180° out of phase with the even vertical meander patterns,
- b) a plurality of even and odd horizontal meander patterns with loops of a second frequency which is higher than the first frequency wherein the odd horizontal meander patterns being located between every two even horizontal meander patterns,
- c) wherein the vertical meander patterns are intertwined with the horizontal meander patterns to form a plurality of triangular cells,
- d) wherein each cell is formed of one section of loops of the vertical meander patterns and two sections of loops of the horizontal meander patterns, and
- e) wherein said horizontal meander patterns and said vertical meander patterns are disposed and adapted to cooperate so that after expansion of said stent, when said stent is disposed in a curved lumen, cells on the outside of the curve open in length but narrow circumferentially whereas cells in the inside of the curve shorten in length but widen circumferentially.

Claim 193 (new): Expandable continuously flexible stent comprising a plurality of enclosed flexible spaces, each of the plurality of enclosed flexible spaces including:

- a) a first member having a first end and a second end;
- b) a second member having a first end and a second end;
- c) a third member having a first end and a second end;
- d) a fourth member having a first end and a second end, the first end of the first member communicating with the first end of the second member, the second end of the second member communicating with the second end of the third member, and the first end of the third member communicating with the first end of the fourth member;
- e) the first member and the second member with the curved portion at their ends forming a first loop;
- f) the third member and the fourth member with their curved portion at their ends forming a second loop
- g) a fifth member having a first end and a second end;
- h) a sixth member having a first end and a second end;
- i) a seventh member having a first end and a second end;
- j) an eighth member having a first end and a second end;
- k) a ninth member having a first end and a second end ;and
- l) a tenth member having a first end and a second end, the first end of the fifth member coupled to the second end of the first member, the second end of the fifth member communicating with the second end of the sixth member, the first end of the sixth member communicating with the first end of the seventh member, the second end of the seventh member communicating with the second end of the eighth member, the first end of the eighth member communicating with the first end of the ninth member, the second end of the ninth member communicating with the second end of the tenth member, and the first end of the tenth member coupled to the second end of the fourth member;

- m) the fifth member and the sixth member with the curved portion at their ends forming a third loop;
- n) the seventh member and the eighth member with the curved portion at their ends forming a fourth loop; and
- o) the ninth member and the tenth member with the curved portion at their ends forming a fifth loop,
- p) namely all in such a manner that the enclosed flexible spaces are defined by two cycles of a pattern of loops at a first frequency and by three cycles of a pattern of loops at a second frequency that is higher than said first frequency;
- q) wherein, when the expanded stent is in a curved lumen, cells on the outside of the curve at communication points of the first and fifth and fourth and tenth members, the cell opens up increasing the length of the cell and at each of the first through fifth loops, the adjoining members come closer to each other, to cause the cells to become narrower circumferentially and compensating for the increase in length, whereas cells on the inside of the curve at communication points of the first and fifth and fourth and tenth members, the cell closes down decreasing the length of the cell and, at each of the first through fifth loops, the adjoining members move apart, to cause the cell to become wider circumferentially and compensate for the decrease in length.

Claim 194 (new): A multicellular stent comprising:

a plurality of bands of square cells, each square cell including a first loop disposed generally longitudinally opposite a second loop, and a first pair of flexible compensating members joined to the legs of first and second loops;

a plurality of bands of triangular cells, each triangular cell comprising a first loop containing section arranged generally in the circumferential direction, a second loop containing section connected to the first loop containing section, and a third loop

containing section connected to the first loop containing section and the second loop containing section, and

whereas the first section of the triangular cell is part of the meander pattern arranged in the circumferential direction with a first frequency and wherein the second and third sections of the triangular cell are part of a meander pattern arranged in the circumferential direction with a second frequency which is higher than the first frequency, and

wherein loops in both square and triangular cells are disposed and adapted to cooperate so that, when the expanded stent is in a curved vessel, cells on the outside of the curve open in length, but narrow circumferentially whereas cells on the inside of the curve shorten in length but widen circumferentially.

Claim 195 (new): Stent for widening a vessel in a human body comprising:

a plurality of first circumferential bands each being a basically sinusoidal pattern of loops at a first frequency;

a plurality of second circumferential bands each being a basically sinusoidal pattern of loops at a second frequency higher than said first frequency, alternating with said first circumferential bands and periodically coupled to the adjacent first bands to form cells;

wherein the first circumferential bands comprise:

even first circumferential bands each containing a pattern of loops; and

odd first circumferential bands each containing a pattern of loops which are 180° out of phase with the loops of the even first circumferential bands, an odd first circumferential band occurring between every two even first circumferential band.

Claim 196 (new): Expandable continuously flexible stent comprising a plurality of enclosed flexible spaces, each of the plurality of enclosed flexible spaces including:

- a) a first member having a first end and a second end;
- b) a second member having a first end and a second end;
- c) a third member having a first end and a second end;
- d) a fourth member having a first end and a second end, the first end of the first member communicating with the first end of the second member, the second end of the second member communicating with the second end of the third member, and the first end of the third member communicating with the first end of the fourth member,
- e) the first member and the second member with the curved portion at their ends forming a first loop;
- f) the third member and the fourth member with their curved portion at their ends forming a second loop;
- g) a fifth member having a first end and a second end;
- h) a sixth member having a first end and a second end;
- i) a seventh member having a first end and a second end;
- j) a eighth member having a first end and a second end;
- k) a ninth member having a first end and a second end; and
- l) a tenth member having a first end and a second end, the first end of the fifth member coupled to the second end of the first member, the second end of the fifth member communicating with the second end of the sixth member, the first end of the sixth member communicating with the first end of the seventh member, the second end of the seventh member communicating with the second end of the eighth member, the first end of the eighth member communicating with the first end of the ninth

member, the second end of the ninth member communicating with the second end of the tenth member, and the first end of the tenth member coupled to the second end of the fourth member;

- m) the fifth member and the sixth member with the curved portion at their ends forming a third loop;
- n) the seventh member and the eighth member with the curved portion at their ends forming a fourth loop; and
- o) the ninth member and the tenth member with the curved portion at their ends forming a fifth loop, wherein, when the expanded stent is in a curved lumen, cells on the outside of the curve at communication points of the first and fifth and fourth and tenth members, the cell opens up increasing the length of the cell and at each of the first through fifth loops, the adjoining members come closer to each other, to cause the cells to become narrower circumferentially and compensating for the increase in length, whereas cells on the inside of the curve at communication points of the first and fifth and fourth and tenth members, the cell closes down decreasing the length of the cell and, at each of the first through fifth loops, the adjoining members move apart, to cause the cell to become wider circumferentially and compensate for the decrease in length,
- p) namely all in such a manner that the enclosed flexible spaces are defined by two cycles of a pattern of loops at a first frequency and by three cycles of a pattern of loops at a second frequency that is higher than said first frequency.